To Our Stakeholders,

This is our eighth annual report as Simulation, Training and Instrumentation Command (STRICOM). Dynamic changes in technology and interactive media already alter the way our Army operates, and it is even more vital to the way we train, test and support our soldiers around the world. STRICOM continues to evolve not only to keep pace, but also to lead the way in the simulation and modeling world of rapid technology changes.

STRICOM is on point to leverage technology from a myriad of sources including Hollywood and academia. Through our partnership with the University of Southern California at the Institute for Creative Technologies (ICT), we leverage art and technology for synthetic environments that are so compelling and life-like, participants react as if they were real… simulations that "make you sweat".

STRICOM also leverages commercial technology as a source. The tank game "Spearhead" by Mäk Technologies, coupled with the Force XXI Battle Command Brigade and Below is one example. We are stride for stride with this impressive trend of using commercial technologies for military training and their integration into training systems; in this case, providing the same digital skills required on the tactical battlefield.

STRICOM is a partner with the Joint Advanced Distributed Learning Co-Laboratory and we are the only government agency with a Science and Technology Objective (STO) focused in this area. STRICOM continues leadership in building standards for distribution of learning and is exploring technologies to expand the use of the Internet for 3-D simulation and training.

STRICOM's Omnibus Contract (STOC) is a new large procurement vehicle to supply a rapidly changing military with the best in training technologies, while simultaneously cutting costs and delivery time. The eight year $4 billion contract (conservative estimate) is structured to address each of our domains: live, virtual, constructive and test instrumentation. Contractors pre-qualify in each of the domains permitting a quicker acquisition of the full spectrum of warfighter needs throughout the Army and Department of Defense. We estimate cutting from 18 to 36 months off of acquisition schedules.

Our people-oriented focus literally runs the gambit; from, our monthly Command-wide Fun Run, where members of the Command voluntarily run 3-4 miles in classic U.S. Army formation singing Jodies, to forming teams to run in the Army's 10-miler, to standing in line to give blood to the Central Florida Blood Bank. Here at STRICOM we are a highly educated, highly skilled and conscientious workforce. Our people are our greatest asset - that is something that will never change.

We have only just begun, STRICOM continues to be on point for the Army by providing interoperable training, testing, instrumentation and simulation solutions for the Army's Transformation to the Objective Force.

HOOAH!

Stephen M. Seay
Brigadier General, USA
Commanding

Forward by Brigadier General Stephen M. Seay, Commanding General.

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Photographs "in film" are intended to show a pictorial chronology of FY2000 and may or may not refer to the topic of the page on which they appear.
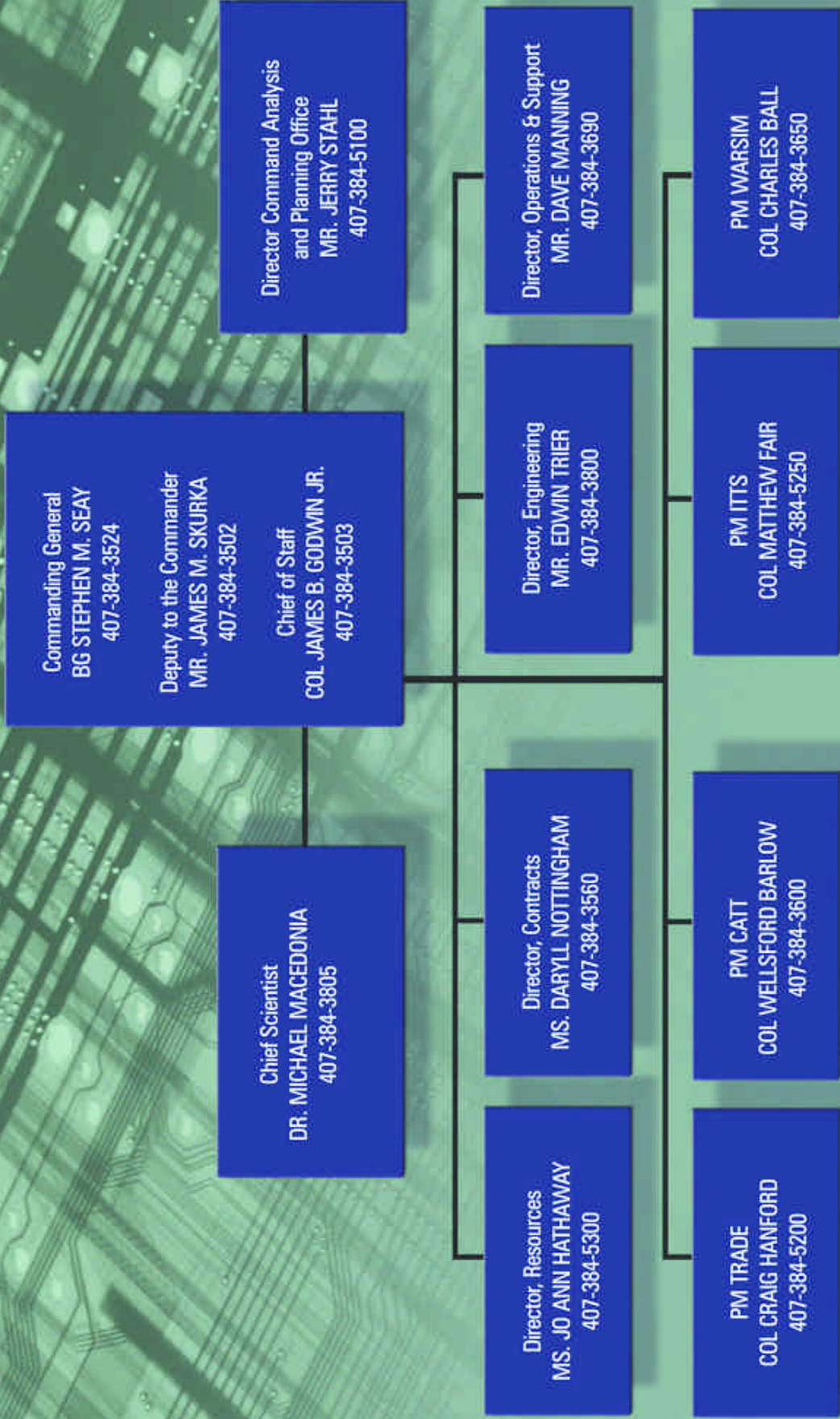
STRICOM VISION

On Point for the Army in Interoperable Training, Testing, Instrumentation, and Simulation Solutions for the Army's Transformation to the Objective Force!

STRICOM FY2000

Commanding General
BG STEPHEN M. SEAY
407-384-3524

Deputy to the Commander
MR. JAMES M. SKURKA
407-384-3502

Chief of Staff
COL. JAMES B. GODWIN JR.
407-384-3503

Director Command Analysis and Planning Office
MR. JERRY STAHL
407-384-5100

Chief Scientist
DR. MICHAEL MACEDONIA
407-384-3805

Director, Operations & Support
MR. DAVE MANNING
407-384-3690

Director, Engineering
MR. EDWIN TRIER
407-384-3800

Director, Contracts
MS. DARYLL NOTTINGHAM
407-384-3560

Director, Resources
MS. JO ANN HATHAWAY
407-384-5300

PM WARSIM
COL CHARLES BALL
407-384-3650

PM ITTS
COL MATTHEW FAIR
407-384-5250

PM CATT
COL WELLSFORD BARLOW
407-384-3600

PM TRADE
COL CRAIG HANFORD
407-384-5200

Command Financial Highlights
Year ending 30 September 2000

| STRICOM Financial Highlights	1998	1999	2000
Training Mission Area	256	309	268
External Customers	126	161	212
Foreign Military Sales	21	91	28
Technology Base	9	8	16
Advance Simulation	48	8	7
Test & Evaluation	87	78	80
Contractor Logistics Support	173	178	180
Totals	**$720**	**$833**	**$791**

All figures are in Millions ($)
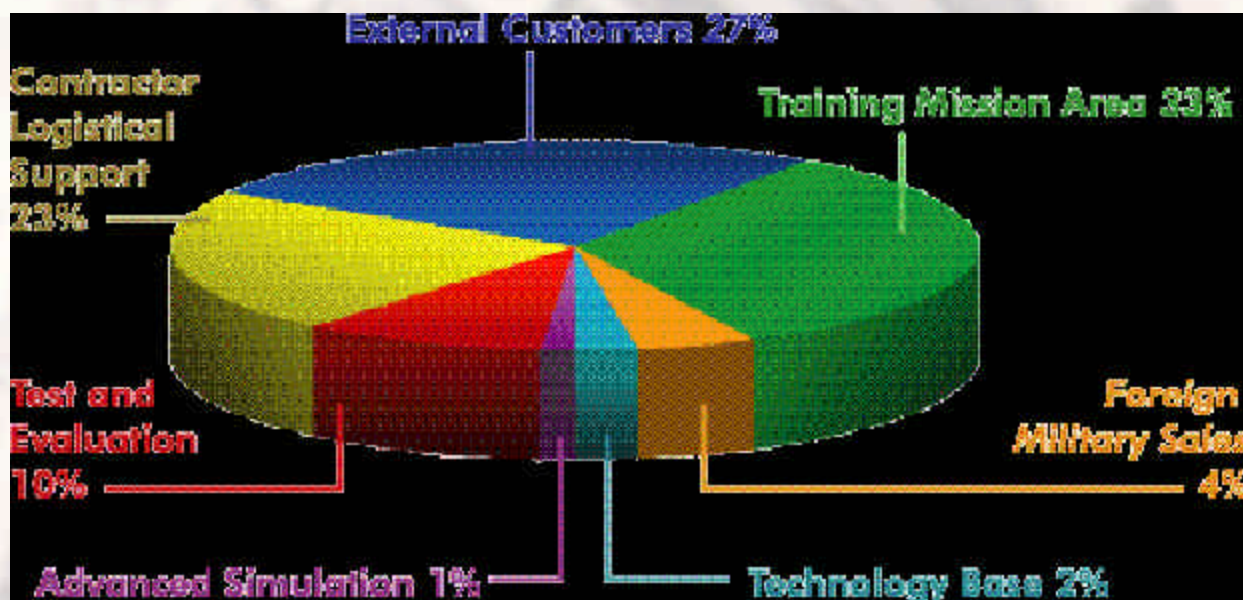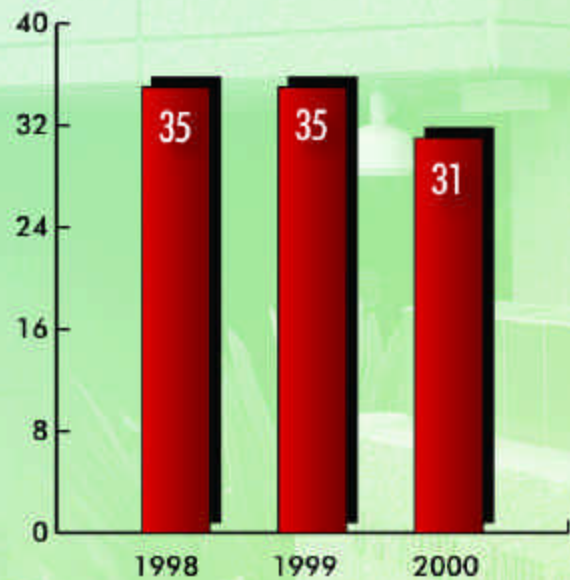

Top 10 STRICOM Contractors: (by dollar value)

Lockheed Martin
Cubic Defense Systems, Inc. VE
Litton Industries, Inc.
United Industrial Corporation
Science Applications International Corporation
Raytheon Company
SAAB AB
Evans & Sutherland Computer Corporation
EER Systems Inc.
MAK Technologies Inc.

Civilian Employees
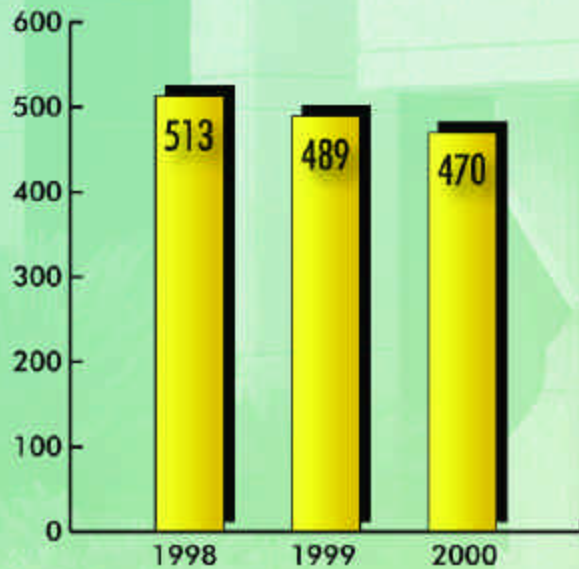
Authorized Year ending 30 September 2000.

Military Employees

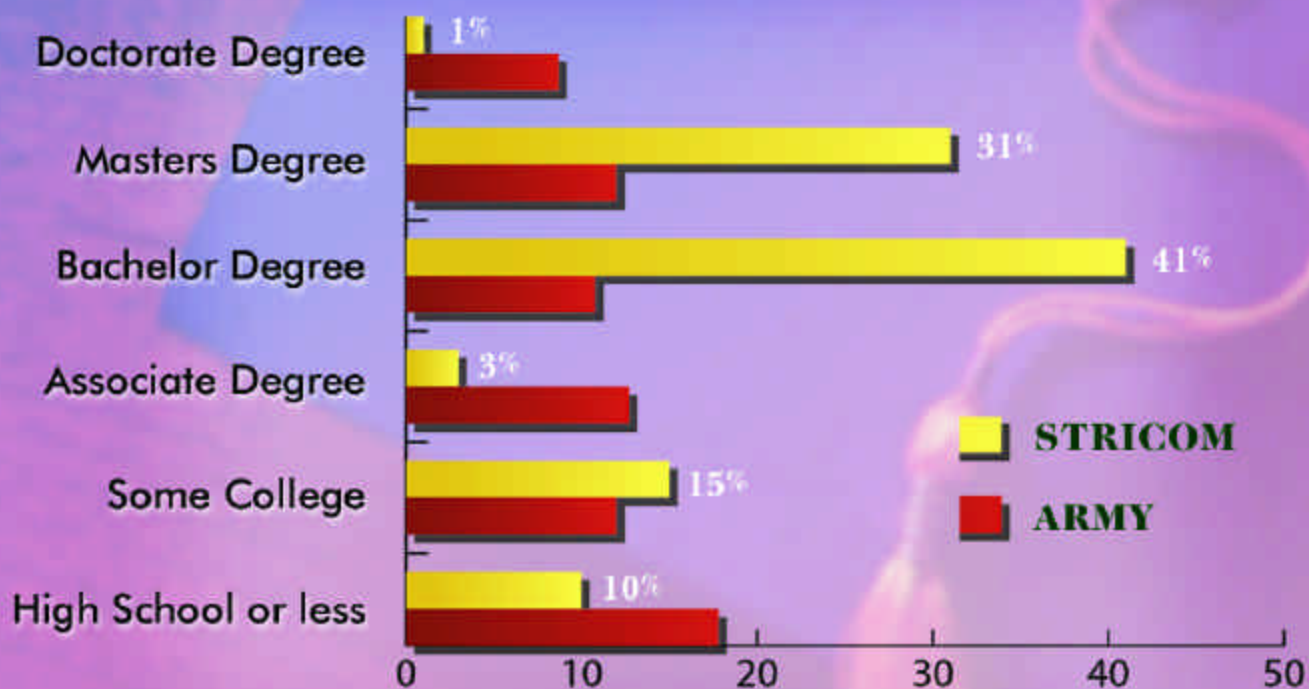Authorized Year ending 30 September 2000.

Webster UNIVERSITY

STRICOM MBA Program
From FY98 to FY00

- 28 Graduates in MBA Program
- 15 students currently enrolled

New!
## Under Graduate Degree
Program initiated

Columbia COLLEGE

Educational Level Percentages:
STRICOM vs. ARMY

Doctorate Degree — STRICOM 1%
Masters Degree — STRICOM 31%
Bachelor Degree — STRICOM 41%
Associate Degree — STRICOM 3%
Some College — STRICOM 15%
High School or less — STRICOM 10%

STRICOM
ARMY

Percentage of Full-time Workforce by Degree

(Full-time Permanent Employees, Degree level shown as rounded percentage)
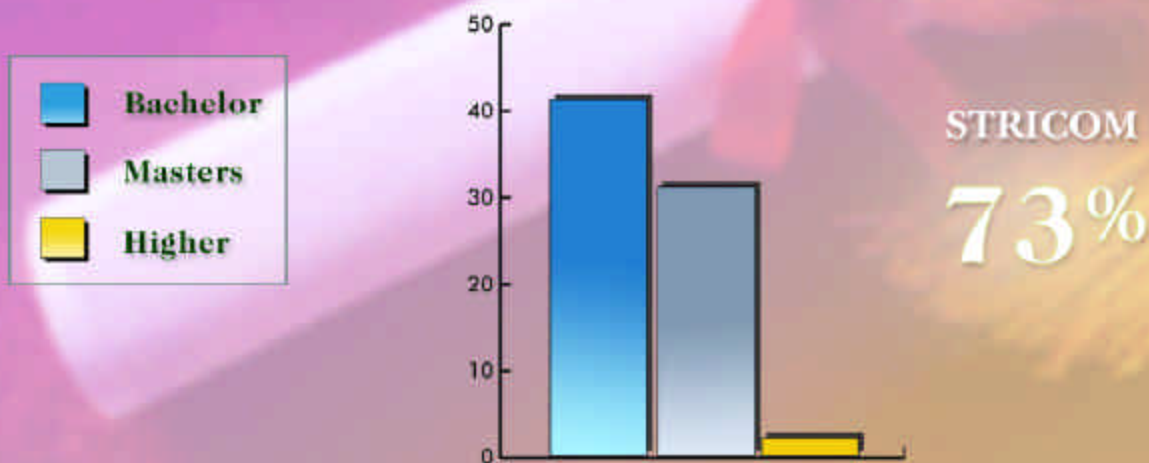
Bachelor
Masters
Higher

STRICOM
73%

- **Senior Leader Advisory Board** *(SLAB)*: To assist in the Army's and other Services' resource and planning processes, STRICOM created a SLAB comprised of several, retired senior military and civilian leaders. The SLAB assists us in Command-wide strategic direction.

- **Board of Directors** *(BOD)*: To resolve command issues, STRICOM organized a BOD, which is comprised of two-star representatives from key stakeholder organizations, such as DCSOPS, PA&E, OASA (ALT), ATEC, TRADOC, NSC, and III Corps. The BOD provides the linkage to the users and at the same time the integration of STRICOM's interests and requirements into the Army's resource planning and execution processes.

- **Technical Advisory Board** *(TAB)*: To help STRICOM focus on new simulation and training technologies, STRICOM formed the TAB, comprised of senior technical CEOs/Presidents. The TAB assists STRICOM to ensure currency and relevancy.

- **Congressional Demo:** To provide Congress with the most current information on our visions, programs and requirements, STRICOM provided a technological display for the Members and staff of the House of Representatives in the Rayburn House Office. The success of this display was tremendous more are planned.

- **Institute for Creative Technologies** *(ICT)*: STRICOM was the driving force behind the establishment of the ICT in August 1999, which formally brought Hollywood and the Army together contractually for the first time. In one year, we successfully guided the ICT through staffing and reviews by the Technical and Executive Advisory Boards. The opening of the ICT facilities in Marina Del Rey, CA culminated on 26 September 2000, which was hosted by the Secretary of the Army, the Honorable Louis Caldera.

- **Value Engineering** *(VE)* **Program:** The STRICOM VE Program is one of the most viable and effective programs within AMC. We achieved 206% of our FY 99 goal. We were the first MSC to achieve our FY 00 goal and are currently at 396%. Over the last two fiscal years, STRICOM has held 10 Strategic Workshops which generated new funds, spawned other Workshops, stood up a PM shop, established SOPs, and improved communications with STRICOM and it's partnering commands.

❦ **Technology Development Center** *(TDC)***:** The TDC serves as the focal point for the Command's Research and Development efforts. It currently consists of 8000 SF. In FY 01, it will grow into 32,000 SF, to include 10,000 SF of lab space. There are now over 40 resident engineers, contractors, UCF faculty and students at the current TDC but will ultimately have over 80 full-time and over 20 part-time residents. There have been over 5000 visitors since it was established in May 1999 to include:

> *Secretary of the Army Louis Caldera*
> *Under Secretary of the Army Gregory Dahlberg*
> *Florida Governor Jeb Bush*
> *Dozens of General Officers and Senior Executives*

❦ **Partnership Building:** STRICOM created a potential opportunity to partner with the US Navy and the University of Central Florida for a common facility for simulation research, development, demonstration and training. The facility is envisioned to be a national asset for additional partnering with other Services, federal and state agencies and academia.

❦ **Inter-Service/Industry Training, Simulation and Education Conference** *(I/ITSEC)***:** I/ITSEC is the world's premier event for the modeling, simulation and training community. STRICOM hosted the FY 00 I/ITSEC with over 12,000 participants and over 200,000 square fee of exhibit space. More Army general officers attended I/ITSEC 1999 than ever before, including Generals Coburn and Abrams.

❦ **CRADA with University of Central Florida** *(UCF)***:** The purpose of CRADA is to establish a Research and Technology Collaboration Project to significantly broaden the internal research capability of UCF's Institute for Simulation and Training (IST) and help STRICOM conduct research & technology developments, technology applications and technology transfer. CRADA provides an immediate means to demonstrate and transition existing research between the parties or other entities as well as attract new funded research projects.

❦ **Reorganization:** STRICOM underwent a major reorganization in FY 00, aligning the training aspect of the Command into the domains of Live, Virtual and Constructive. The new organization presents a much clearer picture of who we are and what we do for our Army.

❦ **Information Technology:** STRICOM's IT office continues to leverage industry in solving IT challenges. Already largely outsourced (80%+), the Command has transferred accountability and purchasing authority to its support contractors, largely achieving the savings offered by seat management without giving up IT ownership.

⚜ **SOCOM Support Mission:** STRICOM restructured its management organization to better support increased customer business with the United States Special Operations Command (SOCOM). The new structure combines resources of NAWC-TSD, AFAMS, Marine Corps Programs (Orlando), and STRICOM to support the Special Operations Forces Training Systems requirements through a combined Florida Simulation Center (FSC) team approach. This approach has greatly increased the effectiveness of both the training and operational capabilities of the USSOCOM Warfighter.

⚜ **National Missile Defense** *(NMD)*: STRICOM is evaluating a proposal to conduct test, training and exercise capabilities for the JPO NMD Program and submitted a proposal for STRICOM to assume PM responsibilities for training of the JPO NMD test, training and exercise capabilities.

⚜ **National Guard Bureau:** STRICOM has been instrumental in assisting the Army National Guard in providing training aids, devices, simulations and simulators to their soldiers.

⚜ **CCTT:** STRICOM successfully completed Initial Operational Test and Evaluation (IOT&E) in 1998 and gained Army Systems Acquisition Review Council (ASARC) approval by the Army Acquisition Executive (AAE) for CCTT Full Rate Production. CCTT is one of two Acquisition Category (ACAT) programs in STRICOM. The Army Acquisition Executive (AAE) has delegated Milestone Decision Authority (MDA) to Commander STRICOM. CCTT has completed Low Rate Initial Production (LRIP) and continues with Full Rate Production, providing the most technically advanced virtual simulation system in the world to the warfighter in support of critical collective training.

⚜ **CCTT XXI:** STRICOM gained approval for Army funding for CCTT digitization. The Command has successfully integrated Force XXI Battle Command Brigade and Below (FBCB2) hardware into CCTT at Fort Hood, Texas. We continue to expand CCTT digitization by adding Semi-Automated Forces (SAF) behaviors to support training of the improved digital communications and situational awareness and is expanding interfaces to the Army's Tactical Command and Control Systems.

⚜ **MILES 2000:** STRICOM initiated fielding, supported Ranger training and participated in Land Warrior instrumentation.

❧ **AVCATT-A:** STRICOM successfully accomplished Milestone I and II, gaining Milestone Decision Authority (MDA) approval for entry into the Engineering/Manufacturing Development acquisition phase. PM CATT completed a successful fully open competition and awarded a contract in October 1999. The contractor has completed initial hardware design and continues to progress on software development tasks.

❧ **FSCATT:** STRICOM continued the fielding of 35 M109A5 systems to Fort Sill and multiple National Guard sites, in addition to awarding a follow-on production contract for 10 M109A6 (Paladin) trainers to begin fielding in FY01. Both M109A5 and M109A6 FSCATT production and fielding remains on schedule. In addition, the FSCATT is credited with saving the Army over $1.1M through Value Engineering initiatives.

❧ **Engagement Skills Tactical *(EST)*:** STRICOM obtained approval for the EST 2000 Low Rate Initial Production (LRIP) and awarded a contract for 76 five lane systems. Initial EST 2000 production deliveries are scheduled to be fielded in 2Q00 to Fort Benning and Fort Lewis in direct support of the Army Transformation effort and Initial Brigade Combat Team (IBCT) training.

❧ **PM JSIMS:** The DoD moved the JSIMS program under the Army leadership, designating MG Bond as the Program Manager. Under MG Bond's direction and coordination with the Services and DoD, he created a JSIMS Alliance Executive Office, headed by an SES, to provide program oversight. He split the former organization to provide clearer functional responsibilities. He secured much needed additional funding for program; and facilitated the move of the program to a revised architectural solution.

❧ **PM OneSAF:** Program was chartered as a board selected PMO.

❧ **Dynamic Infrared Screen Projector:** DIRSP was delivered to the Redstone Technical Test Center in Feb 00.

❧ **FBCB2/MAIS:** The Force XXI Battle Command Battalion/Brigade testing was successfully supported with the Mobile Automated Instrumentation Suite in May 00.

❧ **Threat Simulator/Simulation Program Plan *(TSPP)*:** The TSPP process was institutionalized during the FY 99-00 timeframe. It purpose is to identify and compile total Army Requirements for threat materiel solutions, clearly articulate those needs, and champion those solutions through the Army POM process. It is chaired by the AMC Deputy Chief of Staff for Research, Development and Acquisition.

❧ **Fiber Optic Network *(FON)*:** Final operational capability of Fiber Optic Network (FON) at Aberdeen Test Center was achieved in Aug 00.

❧ **Common Technical Instrumentation Architecture** *(CTIA)*: Developing common architecture for all instrumentation requirements.

❧ **Fixed Tactical Internet** *(FTI)*: STRICOM demonstrated the viability of capitalizing equipment at Fort Hood to establish an FTI to support training without the need to deploy signal units. This system greatly facilitates digital training and allows support organization to inject virtual/ construction simulation/stimulation play into an exercise without deploying additional soldiers as "training aids." This solution is rapidly becoming the Army standard.

❧ **FMS:** Foreign Military Sales received over $100M in new FMS business in the last year. Highlights include the establishment of Simulation Centers in Eastern Europe.

❧ **Aviation Simulation:** Growth went from $27M to $179M.

❧ **SIMCI:** STRICOM co-chairs the DA Simulation to-C4I Interoperability (SIMCI) IPT. The IPT was established to provide recommendations on Army level policy to the Army Model and Simulation Executive Council (AMSEC) for improving interoperability between the Models and Simulations (M&S) and Command, Control, Communications, Computers, and Intelligence (C4I) Domains.

❧ **ACRT:** Advanced Concept Research Tools have been fielded at all Core DIS Facilities.

❧ **Logistics/Life-Cycle Support:** STRICOM's Logistics Directorate (now Operations and Support Directorate) reached it's final goal of five major "umbrella" contracts for life-cycle support of training devices, awarding thee new contracts during the past two years. These support contracts have enable the Command to remove itself from the "arts" business and "purchase" levels of readiness, providing not only system availability but operational/operator support.

❧ **Live Training:** LCCS Live Training has a very large cost avoidance, validated at approximately $7M the first year as a result of consolidating 3 separate contracts into one.

❧ **Constructive Training:** LCCS Constructive Training savings allowed us to hire a few additional operators. And as a result of a high level of customer satisfaction, the contract grew about 40% in reimbursable work in just 7 months.
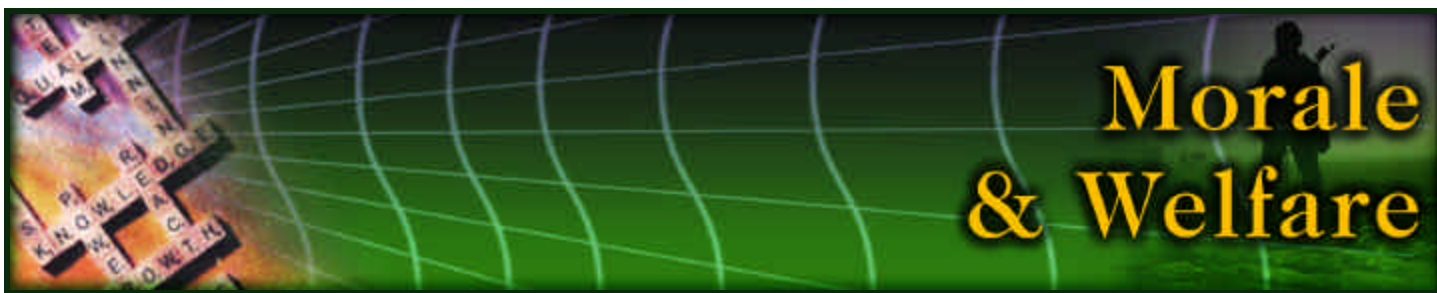
Acquisition Streamlining

✤ **STOC:** In order to competitively procure supplies and services for training devices, simulation systems, and test instrumentation, STRICOM started a solicitation for a best value, multiple-award, indefinite delivery, indefinite quantity contract. STRICOM's Omnibus Contact began awards commencing September 2000. This IDIQ-type contracting vehicle will fundamentally change the manner in which STRICOM conducts business, enabling the Command to rapidly respond to Army needs at greatly reduced costs.

✤ **MOUT ID/IQ:** PM TRADE/STRICOM established the Military Operations on Urbanized Terrain (MOUT) ID/IQ as the contracting vehicle to fulfill DoD and other Federal Agency needs. This effort establishes commonality among competing solutions, enabling simplicity in training and life-cycle support.

✤ **Acquisition Reform Initiatives Assessment Team *(ARIAT)*:** The 2000 ARIAT team reaffirmed STRICOM as the lead Command on Acquisition Reform within the AMC community.

✤ **Partnering:** STRICOM has implemented an extremely successful and aggressive Partnering Program, headed by our Chief Legal Counsel. We have conducted numerous sessions; significantly enhancing program management processes, working relationships, and setting the conditions for cost savings/avoidance.

♥ **SHAPE (Fitness Program):** Employees are now authorized by the Commander to participate in a monitored fitness program, resulting in improved employee lifestyles (47 employees successfully completed in FY99, currently 36 employees in the FY00 program).

♥ **Blood Drives:** Blood Drive participation has grown at STRICOM from 221 pints in 1998 to 551 in 1999. The FY00 Command goal of 600 pints was exceeded with 632 pints.

♥ **Quarterly Commander's Call:** STRICOM initiated quarterly Commander's Calls for the entire workforce.

♥ **Junior Achievement:** STRICOM encouraged participation with the Junior Achievement Organization that works with local students and businesses to educate and inspire young people to value free enterprise, understand business and economics in preparation for the work environment.

♥ **Commander's Fun Run/Walk:** STRICOM increased the Commander's Fun Runs/Walks to monthly (previously was quarterly) and encouraged employees to lead cadence during the runs.

♥ **Breakfast with the Boss:** STRICOM initiated quarterly, informal breakfasts between the CG and all levels of the workforce.

♥ **Prayer Breakfast:** STRICOM initiated a monthly prayer breakfast in June 1999. The group attendance began at 25, but is now over 75. We have had several guest speakers to include reknown radio/TV personality Mr. Dwight Bain, the AMC Command Chaplain Morrison, Mr. Simon Bailey the Director of Sales for Walt Disney World Resorts, and Rabbi Moshe Elbaz. Additionally, we have had several local ministers from several different faiths. The group has grown into a Florida Simulation Center Prayer Breakfast, with attendance from all the Services as well as several contractors from the local area. The culmination of recent achievements has been the formation of a Gospel Choir.

♥ **Command Surveys:** As a result of employee's concerns voiced in the Command Survey (January 2000), the command will provide added focus on job recognition, opportunities for promotion/job rotation, and training to help managers deal more effectively with poor performers.

♥ **STRICOM Training and Education Program** *(STEP)***:** STRICOM took the initiative to automate the training process and provide all employees with a one-stop-shop for career information and planning. Collectively, STRICOM, ACALA, ASAALT and RDAISA are working closely to ensure the STRICOM workforce has the database to assist them in choosing needed training that fits STRICOM's strategic focus and the individual employees' needs.

♥ **Smoking Cessation:** STRICOM encourages employees to be involved in our Smoking Cessation program to assist them in their goal to stop smoking (8 employees completed this program in FY99).

♥ **Community Activities:** In keeping with the spirit of community activity, STRICOM employees participated in Hail and Farewells, Corporate Run/Walks, Command Fun Run/Walks, Golf Tournaments and AUSA 10-Miler.

Partnering for Success
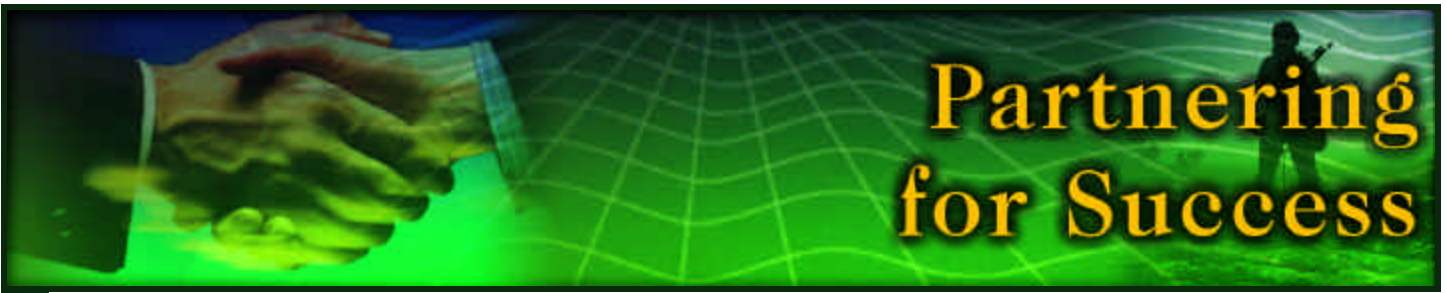
STRICOM is currently using the AMC Command Counsel's Partnering for Success program on its major procurement contracts. This program puts Government and contractor management, as well as key program employees, together for workshops throughout contract performance. Partnering removes the "us vs. them" stereotype that has often plagued Government-Contractor relationships in the past. Partnering replaces this paradigm with a cooperative, open communication oriented model. "Surprises" in a Government contract benefit no one.

Through use of the Partnering workshops, we developed action plans with our Contractor partners that enhance the open flow of communication with the goal of delivering a quality product to the soldier and a good return on investment to the contractor. We have partnered on the following programs:

PROGRAM	COMPANY
❖ Close Combat Tactical Trainer *(CCTT)*	Lockheed Martin Information
❖ Warfighters Simulation *(WARSIM)*	Lockheed Martin Information
❖ Multiple Integrated Laser Engagement System *(MILES 2000)*	Cubic Defense Systems
❖ Aviation Training Life Cycle Contractor Support *(LCCS)*	L3 Communications Link Simulations
❖ Fire Support Combined Arms Tactical Trainer *(FSCATT)*	L3 Communications Link Simulations
❖ Aviation Combined Arms Tactical Trainer *(AVCATT-A)*	L3 Communications Link Simulations
❖ Live Training Life Cycle Contractor Support *(LCCS)*	L3 Communications Link Simulations
❖ Intelligence Electronic Warfare Tactical Proficiency Trainer *(IEWTPT)*	Motorola
❖ Virtual Training Life Cycle Contractor Support *(LCCS)*	DynCorps
❖ Warfighter Intelligence Module *(WIM)*	Veridian

To get a copy of the AMC Partnering pamphlet or to learn more about the program, check out these websites:

http://www.stricom.army.mil/STRICOM/ABOUTUS/COUNSEL/PARTNERING/
http://www.amc.army.mil/amc/command_counsel/partnering.html

The Product Manager for Ground Combat Tactical Trainers (GCTT) and their STRICOM and NAWC TSD project team matrix support personnel hopped over the pond to the University Behavioral Center (UBC) in research park for an off-site team building exercise on Friday, 25 AUG 2000. Ms. Lori Homan, Director of Activities, training coordinator for UBC, and facilitators Mindy Byrd and Mike Spahr, ran the exercise on their Ropes course at the back of their facility. The 20 participants were divided into two groups of ten for an afternoon of various Ropes exercises. Each exercise was designed to highlight team skills of communication, leadership, trust, and cooperation.

The first experience was the Log exercise, where the group of ten participants was divided equally into the Pepsi side and the Coke side. The goal of the exercise was to get all the Pepsi people over to the Coke side and all the Coke people over to the Pepsi side of the log without touching the ground.

The next exercise was called the Cancer cure, where the object was to get all 10 people and a Styrofoam cup of cancer cure over to the other side of the washed out bridge -without spilling the cure. The bridge was simulated with hula hoops and a rope swing.

The centipede exercise followed where the goal was to shift leadership while trying to move the group in a coordinated walking step restricted by ropes.

The low wire act exercise had an aircraft cable about 16 inches off the ground suspended between trees. The goal was to get the entire team on the wires and circumnavigate around the various segments until they all reached the last segment and were all standing together.

The three platform mambo exercise consisted of three raised platforms which stood about 2 foot above ground. The object is to move all 10 group members from the first to the second and then to the third using a 2 by 6 plank -without touching the ground.

The center platform was only big enough to support 6 people, and the plank is two foot short of reaching the third platform.

The last group exercise combined both groups into a 20-person team to negotiate a 12 foot climb over a wooden wall. The object was to help people up to the top of the wall, get over the wall and then come down the other side. The trust established on the prior exercises served the teams well and they got the whole group over the wall. After the wall exercise the facilitators had the team members share their feelings about what they had accomplished. One consensus was that next time we would pick a cooler day!!

The afternoon's team building exercise was a major success and everyone enjoyed their experience. After each exercise the team and team members had grown more confident and more cohesive as a team. The teambuilding had worked.

Development	Project Manager
Advanced Multiple Objective Acquisition System *(AMOAS)*	PM ITTS
Abrams Full Crew Interactive Simulation Trainer *(AFIST XXI)*	PM CATT
Aviation Combined Arms Tactical Trainer/Aviation Re-configurable Manned Simulator *(AVCATT-A)*	PM CATT
Close Combat Tactical Trainer *(CCTT)* P3I	PM CATT
Family of Interoperable Transceivers *(FIT)*	PM ITTS
Fire Support Automated Test System *(FSATS)*	PM ITTS
Fixed Tactical Internet *(FTI)*	PM TRADE
Foundation Initiative 2010 *(FI 2010)*	PM ITTS
Hardened Subminiature Telemetry and Sensor System *(HSTSS)*	PM ITTS
High Speed Massive Memory/Electronic Film Capability *(HSMM/EFC)*	PM ITTS
Instrumentation XXI	PM ITTS
Land Sea Vulnerability Test Capability *(LSVTC)*	PM ITTS
Lightweight Personnel Detection Device *(LWPDD)*	PM ITTS
M1A2 SEP Maintenance Training System	PM CATT
M2A3 Maintenance Training System	PM CATT
MLRS Maintenance Training System	PM CATT
Mobile IR Scene Projector *(MIRSP)*	PM ITTS
New Generation Army Targetry System *(NGATS)*	PM ITTS
Range Digital Transmission System *(RDTS)*	PM ITTS
Roadway Simulator	PM ITTS
Target Tracking and Control System	PM ITTS
Test Support Network *(TSN)*	PM ITTS
Towed Target Engineering Services	PM ITTS
Transportable Range Augmentation & Control System *(TRACS)*	PM ITTS
Unmanned Aerial Vehicle-Tactical (Target) *(UAV-T(T))*	PM ITTS
Wide Area Mines *(WAM)*	PM TRADE
Wolverine Driver Mission Trainer	PM CATT

Production	Project Manager
Advanced Gunnery Training System *(AGTS)*	PM CATT
Close Combat Tactical Trainer *(CCTT)*	PM CATT
Engagement Skills Trainer 2000 *(EST 2000)*	PM CATT
Fire Support Combined Arms Tactical Trainer *(FSCATT)*	PM CATT
GUARDFIST II Observed Fire Trainer	PM CATT
Improved Target Acquisition Sight *(ITAS)*	PM TRADE
Maneuver Combat Training Centers/Army Battle Command Training System *(MCTC/ABCS)*	PM TRADE
Mobile Automated Instrumentation System *(MAIS)*	PM ITTS
Multiple Integrated Laser Engagement System *(MILES 2000)*	PM TRADE
New Generation Army Targetry System *(NGATS)*	PM ITTS
Opposing Forces Surrogate Vehicle *(OSV)*	PM TRADE
Patriot Omnidirectional Training Aerial *(POTA)* Tow Targets	PM ITTS
CH 47 Upgrade (First Article)	PM CATT
UH 60 Upgrade (First Article)	PM CATT

Close Combat Tactical Trainer:

CCTT is the first member of the Combined Arms Tactical Trainer (CATT) family of virtual, distributed interactive simulations (DIS) for collective training. It supports the training of Armor, Mechanized Infantry, and Cavalry units from platoon through battalion/squadron echelon, including the staff.

The primary training audience operates from both full-crew simulators and mock-up command posts. Crewed simulators - M1A1, M1A2, M2/3A2 Bradley Fighting Vehicle (BFV), FIST-V, M113A3, and HMMWV - are of sufficient fidelity to require individuals and crews to correctly perform their respective tasks in order to successfully accomplish their collective missions. Infantry platoon and squad leaders can also exit their BFV and move to a Dismounted Infantry work-station where they can control their virtual dismounted elements. Commanders and staff members of the training audience use computer workstations located in mock-up command posts to provide artillery, mortar, combat engineers, and logistics units to the synthetic battlefield. The units created and controlled from these workstations require the training audience to plan for and coordinate the implementation of other Battlefield Operating Systems in support of their tactical maneuver. Semi-Automated Forces (SAF) workstations provide additional supporting units (i.e., aviation and air defense artillery) and all opposing forces. Thus, while maneuver units (combat crews and battalion-level staff members) constitute the CCTT primary training audience, all Battlefield Operating Systems are represented in the simulation to ensure quality training within a combined arms training environment - under daylight, night, and fog conditions.

CCTT's visual and terrain databases currently support desert (NTC), temperate (Germany), Ft Hood, TX, Kosovo, and Korea (Dec 01 completed). Mobile versions of CCTT are used to train the National Guard and are capable of deploying with a unit during contingency operations.

Program Status:

The initial operational capability for CCTT was achieved in June 1998. Low Rate Initial Production efforts began in Jan 1998 and provided hardware deliveries to Ft Knox, Ft Benning and CCTT mobile sets in FY99. The ASARC Milestone III was achieved in Nov 1998. Full Rate Production (FRP) efforts began in Jan 1999 with fieldings in FY00 to CCTT sites at Ft Stewart, Ft Hood, Ft Carson (partial), and additional mobile sets. Force XXI Battle Command Brigade and Below (FBCB2) is operational at the Ft Hood CCTT Site 1 and in the M1A2 SEP modules in Site 2. CCTT will be used for the train-up for the FBCB2 operational test.

Projected Activities:

❧ FY00 FRP of CCTT modules will continue with FY01 fieldings to Ft Carson, Ft Riley, and mobiles. CCTT fieldings in FY02 will include sites in Germany and Korea.

❧ Developed Battlefield Combat ID System (BCIS) and will field in CCTT concurrently with BCIS fielding.

❧ Continue development on the Bradley FIST variant kit.

❧ Continue development on Dismounted Infantry and AAR components of CCTT.

❧ Continue interoperability development with Crusader and Comanche simulators.

Contract Awards:

❧ M2A3/M3A3 Maintenance Training System - October 2000 - Research Triangle Institute.

❧ Wolverine Driver Mission Trainer (Proof of Principle) - September 2000 -Lockheed Martin Information Systems.

❧ Czech GF II Observed Fire Trainer (FMS) - June 2000 - Fidelity Systems.

Fielding Events:

❧ Fielded FBCB2 Capability in the AGTS at Ft. Hood

❧ Fielded FSCATT LOT III Howitzer Crew Trainers Ahead of Schedule

PM ITTS Program Highlights:

❧ The Army Test and Training Investment Conference (ATTIC) team provided an information booth at the International Test and Evaluation Association (ITEA) conference at Hershey, PA in Sep 00. ATTIC explores commonalties and leveraging of technologies used within the Army Test and Training communities and other Services.

❧ The Instrumentation Management Office (IMO) delivered the Dynamic Infrared Scene Projector (DIRSP) to the Redstone Technical Test Center in Feb 00.

❧ The Mobile Automated Instrumentation Suite successfully supported Force XXI Battle Command Battalion/Brigade testing in May 00.

❧ The Fiber Optic Network (FON) achieved final operational capability at Aberdeen Test Center in Aug 00.

❧ Reconfigurable Electro-Optical and Magnetic Expendable Target (REMET) was used successfully during the U.S. Marine Corps Short-Range Assault Weapon (SRAW) PREDATOR Developmental Testing at China Lake, in Jan 00. The REMET was successfully detected by the PREDATOR Weapon System during three developmental test shots. The tests included two telemetry rounds on a stationary REMET and one live fire round on a moving REMET. The REMET is a full-scale validated, surrogate tank target that replicates to the SRAW PREDATOR, a Russian T-80 Main Battle Tank (MBT), in its electro-optical and magnetic signature.

❧ PM ITTS' Targets Management Office (TMO) participated in the annual meeting of the Aerial Targets Systems and Technologies Key Technical Area (KTA) of TTCP in May 00 at the Defence Evaluation Research Agency in Aberporth, Wales, United Kingdom. Attendees included representatives from Australia, the United States (Army, Navy and Air Force) and the United Kingdom. Subject matter included Tandem Towed Target, Radar Signature Enhancement Techniques, Enhanced Recovery System, Aerial Target Stability, At-Sea Operation, Actively Controlled Tow Bodies, Cruise Missile Tow Development, etc. Some collaborative programs were identified as well as several study assignments and data exchanges. TTCP is a cooperative program between the Governments of the United States, United Kingdom, Canada, Australia and New Zealand.

✵ The BMP-3 Surrogate (BMP3-S) program received Milestone III approval from PM ITTS, 20 Jan 00. The BMP3-S is the first surrogate target to be designed using virtual prototyping to assure signature fidelity prior to fabrication.

✵ The initial flight of a production MQM- 107E was conducted 11 May at Tyndall Air Force Base, FL. The flight was the first in a series to prove the performance enhancements of the new Integrated Flight Controller software and was successful with all maneuvers being executed as required.

✵ TMO provided target flight services to the Royal Saudi Air Defense Forces (RSADF) for SHAHINE, HAWK, SKYGUARD, and MISTRAL Air Defense Artillery batteries, in Sep. These were the first flights of a projected four-year target operation support contract in the Kingdom of Saudi Arabia. The RSAADF was pleased with the target support.

✵ TMO participated in the 2000 ITEA Symposium in Hershey, PA. Mr. Thomas K. Longstreth, Deputy Under Secretary of Defense (Readiness) was very interested in the future of the MQM-107 as related to the Roadmaps prepared by the Targets Reliance Office for the Joint Targets Oversight Council. (Sep 00).

✵ The Virtual Targets Team presented the Virtual Targets Center (VTC) at the Simulation & Modeling Acquisition Requirements Training (SMART) conference in January, and at the SISO spring workshop in April 00. The attendees of both conferences were enthusiastic about the VTC.

✵ The VTC operated an information booth at the Joint Modeling and Simulation System (JMASS) Users Conference in Dayton, OH. The VTC was explained to numerous model and simulation developers, system and force analysts, and service policy developers who were attending the conference, to include Mr. Walter Hollis, Deputy Under Secretary of the Army (Operations Research).

✵ VTC Team hosted a meeting, 5 April, with representatives from the Department of the Army Office of the Deputy Chief of Staff for Intelligence, AMSO, National Ground Intelligence Center (NGIC), Aviation and Missile Command (AMCOM), Aviation and Missile Research and Development Engineering Center (AMRDEC), and the Targets Management Office. It was agreed that all models included in the VTC would be listed with the AMSO MSRR. This will provide greater visibility to the models available in the VTC to potential users and increase dramatically the contents of the Army MSRR. The group reached a consensus on the issues of model validation and the development of new models.

✵ The VTC provided a display at the TABES 2000 conference held in Huntsville, AL. The VTC Team demonstrated the reuse of Government assets via the Virtual Targets Archive. Major General Sullivan, Commanding General, Aviation and Missile Command, was briefed on the Center's capabilities and suggested that additional marketing efforts should be pursued to inform more people of the existence of the VTC.

❧ The VTC exhibited at the Test and Evaluation Days conference held in Huntsville, AL. The VTC exhibit focused on the development of high-resolution geometry models using the digitization processes. Distribution of geometry models through the Virtual Targets Archive was also highlighted. LTG Paul Kern was briefed on the Center's operations.

❧ The Threat Systems Management Office (TSMO) initiated Advanced Simulation Endgame Methodology (ASEM) efforts to develop a new method for incorporating countermeasures and improving the accuracy of simulations. ASEM is a joint PM ITTS/Army Material Systems Analysis Agency (AMSAA) demonstration program to develop new methodologies for representing endgame assessment of engagements between threat air defense systems and aircraft.

❧ The XM-15S simulator, developed by TSMO, was provided and participated in the 5 week long MACE X exercise in France. A total of fourteen countries provided either additional ground assets or aircraft during this exercise.

❧ TSMO supported validation and accreditation of the Advanced Tactical Combat Model (ATCOM) used by the Comanche Project Manager to analyze the performance of the Comanche helicopter.

Contract Awards:

❧ 1 Oct 99, Lockheed Martin Services Group was competitively awarded a contract to provide Aerial Flight Services to the DoD and Allied nations on an almost daily basis.

❧ 16 Dec 99, Micro Systems, Inc. was awarded a follow-on sole source contract for Target Tracking and Control Station and Signal Processor Vehicle Interface engineering services.

❧ 11 Jan 00, Alpha Data Corporation, an 8a contractor, was awarded a source directed contract for target scoring telemetry transmitters. To reduce production costs and promote small business initiatives, the TMO sought an alternative source for scoring equipment in lieu of electing to exercise an option under an existing contract. This initiative resulted in more than 50 percent savings for a one-year buy. The action was accomplished approximately 45 days after the source was identified utilizing acquisition reform streamlining procedures.

❧ 31 May 00, Raytheon Corp. was awarded a sole source contract to provide four demonstration flights of the Raytheon designed Super MQM aerial target, a subscale, subsonic aerial target. The contract, resulting from a Targets Management Initiative, was for the demonstration of the target's improved capabilities and performance characteristics.

❧ 31 Aug 00, Analytical Services, Inc. was awarded a source directed 8a contract for Program Management support services.

✤ 27 Sep 00, Micro Systems, Inc. was awarded a sole source indefinite delivery, indefinite quantity contract for Target Tracking and Control Station spares.

✤ Awarded a foreign commercial purchase contract for approximately 9800 foreign anti-tank and anti-personnel landmines to support current Army testing and training needs.

Attaboy!
Paper Presented by PM ITTS …

During Oct 99, the Acting Director, Targets Management Office, presented a paper, "Affordable, High Fidelity Targets" at the EURO Unmanned Target Vehicle Conference in The Hague, Netherlands. The conference was sponsored by the European Unmanned Vehicle Systems Association and was endorsed and supported by several European Ministries of Defense. The conference's primary purpose was to bring together various government agencies, that use unmanned target vehicles in T&E applications, with industry representatives to present issues and requirements and to identify leveraging opportunities. Representatives from the United Kingdom Defence Procurement Agency and the Swedish Defense Material Administration have requested follow-up communications to further investigate potential joint programs.

Ready, Action . . . Roll 'em
PM ITTS Media Exposure:

✤ On 26 Jan 00, the Virtual Targets Center was featured in a Redstone Rocket Article. Members of the Virtual Targets Team were interviewed relative to the Virtual Targets Center's support to the DoD modeling and simulation community.

✤ On 16 Apr 00, the Virtual Targets Center was featured in a Huntsville Times Article (same theme as above).

✤ In Jul 00, the MQM-107 was highlighted on CNN as the result of a successful PATRIOT PAC3 missile test. The primary focus was, of course, on the PATRIOT and its effectiveness as a system. However, the MQM-107 launch and flight were shown as part of the video clip.

✤ 11 Aug 00, as a result of the Patriot PAC3 successful hit of a TMO MQM-107 news release, a reporter from the Huntsville Times newspaper interviewed TMO personnel for a follow up story. A brief overview of the TMO programs, with emphasis on the MQM-107 program, as well as a tour of the Targets simulation lab, and a video of the various targets available was provided.

Awards:

- 👍 Commander's Awards to Mr. Eddie M. Meadows and Mr. Ronald Colangelo of the Instrumentation Management Office for outstanding career service.

- 👍 Legion of Merit to COL Mark W. Russell.

- 👍 Legion of Merit to LTC Michelle F. Yarborough.

- 👍 Civilian Achievement Medal to Mrs. Marlene Seaton for outstanding design/implementation of Internal Controls Program.

Personnel Updates:

30 Jun 2000: Project Manager for Instrumentation, Targets and Threat Simulators (PM ITTS) Change of Charter from COL Mark W. Russell to COL Matthew J. Fair.

Aug 2000: LTC Michael Landers, Deputy Director of the Instrumentation Management Office (IMO) was reassigned to PM STI; his replacement, LTC William McGuire, was reassigned from JSIMS.

- **Advanced Warfighting Experiment *(AWE)*:** The AWE provides Army leaders with future operational capability insights across the DTLOMS. The AWE was the "center of gravity" culminating event in the warfighting experimentation process. PM TRADE, in its role as the "life-cycle" manager of the JRTC-IS, facilitated the execution of the Joint Contingency Force AWE in September 2000 by performing the following:

    Installed a Digital Data Storage System (DDSS).
    Performed a SINCGARS Upgrade.
    Installed 100% Fiber Backbone Distributed.
    Developed an Interactive Simulation (DIS) Translator.
    Delivered 55 sets of M2K components to TSM/PM Soldier/Land Warrior.

- **Fixed Tactical Internet *(FTI)*:** Completed FTI Initiative at Ft. Hood for the Lower Fixed Tactical Internet and initiated Upper Fixed Tactical Internet development activities at Ft. Hood.

- **Live Environment Training Systems *(LETS)*:** Continued development for LETS common architecture which is expected to support effective and affordable training everywhere that live training occurs using modern, modular, and reconfigurable technology.

- **The Maneuver Combat Training Center/Army Battle Command System-Integration *(MCTC/ABCSI)*:** The Maneuver Combat Training Center/Army Battle Command System-Integration C4I baseline system successfully provided digital fire support message compilation & translation, and presented information to the After Action Review system used in the Joint Contingency Force-Army Warfighting Experiment (JCF-AWE) at Fort Polk, LA Joint Readiness Training Center and the Division Capstone Exercise (DCX) Phase I at Fort Irwin, CA National Training Center.

National Training Center Range Data Measurement Subsystem *(NTC RDMS)*: Efforts continued in FY00 to determine why there was a loss of data between the instrumented player and the Core Instrumentation Subsystem where the data is collected and used for After Action Reviews. Some problems were identified and fixes are still being implemented.

Military Operations on Urbanized Terrain Instrumentation and Training Devices Working Group *(MOUT I&TDWG)*: The MOUT Instrumentation & Training Device Working Group (composed of the User, Material Developers and Industry Partners) will further efficient and effective management of the materiel acquisition and sustainment activities supporting MOUT training by leveraging resources, technology, and good ideas and ensure, to the maximum extent possible, horizontal technical integration of MOUT training devices and instrumentation.

Objectives:

- ❖ *To share information and good ideas*
- ❖ *To leverage technology and acquisitions*
- ❖ *To solve complex and/or common problems*
- ❖ *To reduce acquisition and sustainment costs*
- ❖ *To synchronize and integrate the collective efforts*
- ❖ *To foster HTI through commonality and standards*
- ❖ *To support the objectives of the MOUT Training Strategy*

MILES 2000: The premier live force-on-force training system replicating direct fire weapon systems with appended LASER devices. Initiated deliveries of MILES 2000 products to Ft Lewis and to the USMC. Integration planning for IBCT MILES to ensure the units have force-on-force training capabilities upon fielding of the primary systems.

Tank Weapon Gunnery Simulation System/Precision Gunnery System *(TWGSS/PGS)*: TWGSS/PGS provides a high fidelity live gunnery training system that appends to the actual combat vehicle. Continued fielding TWGSS/PGS devices and prepared the acquisition to buy out the remainder of these training devices for the Army. Delivered the first Deployable Instrumentation System which supports instrumented force-on-force training outside of the Combat Training Center environment.

SAWE/MILES II: Provided an effective solution to replicating the M2 Bradley TOW firing capability at the NTC. Replicating MILES TOW range, accuracy and killing capability has been an issue since fielding the Bradley in the early 80's. Soldiers are now gaining confidence that their Bradley/TOW systems have lethal effects on the battlefield.

MILES XXI: Planning and preparation for the recompete of the MILES 2000 contract have taken place. As part of the acquisition strategy for the replacement of MILES, PM TRADE will periodically recompete this effort.

☙ Fixed Tactical Internet *(FTI)*:

FIXED TACTICAL INTERNET

FTI is a digital data radio backbone network, which provides the division a realistic training environment` by replicating the tactical internet with virtual and constructive simulations. This alleviates the training requirement to constantly deploy signal assets to establish and maintain the tactical internet. FTI replicates digital systems in order to provide situational awareness down to platoon and squad level. FTI provides the linkage between the brigade Tactical Operations Center (TOC), the battalion TOC, the company, and the platoon through radio data nets on key platforms. As the Army continues to field battlefield command systems the need for digital communications will steadily increase over the next five years. The first phase of the FTI program was a demonstration at Ft. Hood of the FTI capability conducted on November 20, 1998, coincident with a Company Team Lanes training exercise. The FTI was provided by 5 Enhanced Position Location Reporting System (EPLRS) radios installed in TEXCOM towers surrounding the western maneuver ranges. Preliminary analysis of the data suggests that with the addition of three more fixed EPLRS radio sites, all of Ft. Hood will be covered with EPLRS connectivity.
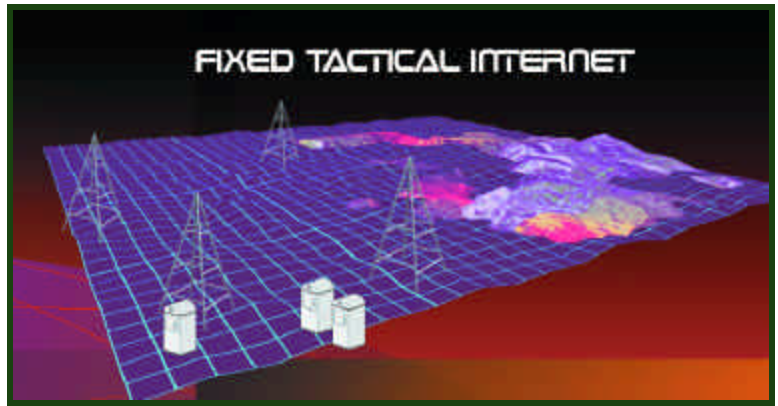
The second phase of the FTI program was to install a permanent FTI at Ft. Hood in Spring and Summer 1999 with FBCB2 compatible EPLRS radios. FTI is expected to support the Warfighter's digital communication needs of training, testing and experimentation applications. STRICOM will continue to support this capability until III Corps budgets for FTI support in the Army's FY02 Program Objective Memorandum (POM).

The third phase of the FTI program will be the migration to the objective FTI capability, which provides the linkage into all of the maneuver & live fire ranges at Ft. Hood, as well as simulation ties into the III Corps Battle Simulation Integration Center, CCTT facility, CTSF, Digital Multi-Purpose Range Complex (DMPRC), Soldier Development Center, etc. - providing an integrated, turn-key solution to digitized training for the new digitized units.

FTI contractors are Lockheed Martin Information Systems, Orlando, FL; TRW, Carson, CA; Nichols Research Corporation, Huntsville, AL.

☙ Military Operations on Urbanized Terrain/Restrictive Terrain Indefinite Delivery/Indefinite Contract *(MOUT/RT ID/IQ)*:

This contract was awarded on 10 May 00. It will assist customers (DoD and Non-DoD) in obtaining products and services in the following areas: Studies/Consultant Services, Proof of Concept, Building(s) (Limited to $500K), Engineering/Integration Services, Logistics and Maintenance and Experimentation. The contract provides customers the means to procure products and services from five (5) knowledgeable

sources and a family of 38 sub-contractors who have expertise in MOUT related areas.

❦ **ID/IQ Contract features:** The ID/IQ contract vehicle will provide materials and support services for efforts at any site needing to conduct MOUT/RT related training or activities. The ID/IQ contract will provide for the following functions:

- ❖ Contract and Delivery Order Management
- ❖ Allows for Source Directed and Competitive delivery orders
- ❖ Information Technology Operations
- ❖ Engineering/Integration Services
- ❖ Telecommunications
- ❖ Information Technology Security
- ❖ Year 2000 Software Strategies, Reprogramming and Solutions
- ❖ Studies/Consultants
- ❖ Proof of Concept
- ❖ Modifications to buildings not to exceed ($500K limit)
- ❖ Infrastructure Upgrades
- ❖ Equipment/Materials
- ❖ Access to multiple Prime contractors and a host of sub-contractors

The contracts awarded under this vehicle will consist of the following type:
- ❖ Firm Fixed Price (FFP)

❦ **Opposing Forces Surrogate Vehicle** *(OSV)*: Project Manager Training Devices (PMTRADE), has continued with the production and fielding of the Opposing Forces (OPFOR) Surrogate Vehicle (OSV). Using the M113 chassis and M2A2 Bradley turret components, the vehicle resembles a Russian BMP-2. Capabilities closely mirror a BMP-2s troop capacity and weapon system. Currently 100 OSV have been fielded to the 11th Armor Cavalry Regiment, the National Training Center (NTC)'s OPFOR. The OSV has performed outstandingly along with positive reaction by both crews and command. Col. John D. Rosenberger stated, "This vehicle is what we need to sustain opposing force. With better technology on these vehicles, we are creating a real threat to the BLUFOR. It better replicates threats we will see in the future. With a tougher force, we are raising the Army standards to a higher level." Col. Rosenberger

also said, "The vehicle is more reliable and it removes much of the maintenance load, thus improving the attitude of the unit." Future fielding will continue in support of all Maneuver Combat Training Centers (MCTC). Additionally, with a slight Visual Modification change, this basic configuration is planed to go into production in a Tank variant to replicate a generic tank threat. First tank version should be fielded to JRTC in FY03.

⚜ **Deployable Instrumented Training System *(DITS):*** for 7th ATC Deployed Operations Group. STRICOM is procuring DITS for 7th ATC use in supporting deployed operations sustainment and reentry training. The DITS is a rapidly deployable Instrumentation System (IS), area weapons effects, command and control (C&C) and After Action Review (AAR) system that can 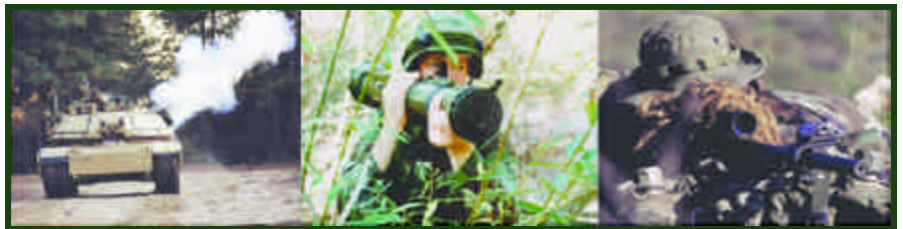be operational within 3 hours. DITS is based on Saab Training Systems commercial off-the-shelf Gunnery and Maneuver Exercise (GAMER) system. DITS instruments U.S. Army standard direct fire Tactical Engagement Simulators (TES), Tank Weapons Gunnery Simulation System/Precision Gunnery System (TWGSS/PGS), and Multiple Integrated Laser Engagement System (MILES). The first DITS system was delivered in Jun 99. A total of 4 DITS, providing 50 square KM coverage when linked together, will be delivered in Dec 01. The DITS may also be used at 4 separate locations. Total players units include:

- ❖ *100 armored vehicle kits,*
- ❖ *100 MILES vehicle adapter kits*
- ❖ *700 dismount player units and small arms TES*

Enhancements are planned to add aviation players and virtual artillery player link.

⚜ **MILES 2000:** Project Manager Training Devices (PM TRADE), has continued with the production, fielding, and replacement of the Basic MILES legacy system which was fielded in the late 70's early 80's. In FY 00 the program Materiel Released 80% of the contract CLINs and fielded its initial site, FT Stewart Ga. MILES 2000 is a state of the art training system that at contract completion will have fielded two Army installations Forts Stewart and Lewis and all United States Marine Corps

requirements, additionally numerous United States Air Force Security Police locations will also have been fielded. MILES 2000 more realistically replicates the ranges of the weapon systems being simulated, additionally the system is more rugged and reliable and less expensive to operate than the previous system. With the fielding of MILES 2000 and follow-on MILES XXI, Soldiers, Marines and Airman will be able to train to maximum extent of their weapon systems and combat platforms and not just to the limits of the current legacy system. Currently the program is in its fourth production option with a fifth option following immediately thereafter. MILES XXI will continue PM TRADEs' mission of replacing Legacy MILES at all home-stations, camps and CTCs.

Aircraft Rescue Fire-Fighting Trainer (ARFF)   Fixed/Modular Structural Trainer   Mobile Structural Trainer

✣ **US ARMY FIRE FIGHTING TRAINING SYSTEMS** *(FFTS)***:** The US Army Fire Fighting Training Systems (FFTS) are state-of-the-art-training systems that safely replicate flames, heat and reduced visibility (using mineral-oil smoke obscuration/generation system) during fire fighting training scenarios. The FFTS integrate proven, commercially available fire fighting training technology into structural (mobile and modular/fixed) or aircraft rescue and fire fighting (ARFF) training systems. The modular/fixed structural FFTS consists of a three-story trainer that replicates bedroom, kitchen, living room, and storage/office fires. It also includes flash-over simulations, and incorporates (as training aids) a passive stand-pipe/sprinkler system and a replaceable cut-away roof section to allow firefighters to vent the FFTS structure. The mobile structural FFTS is a transportable, self-contained (i.e. built-in propane and electrical power sources), two floor version of the modular/fixed structural FFTS. The ARFF trainer is a transportable, self-contained (i.e. with built-in propane and power sources), aircraft mockup (42 ft. long by 8 ft. wide approximately) with a reconfigurable wing (for fixed or rotary configurations). It replicates a cockpit fire, an overheated battery (smoke only), and incorporates a cut-away pilot rescue door as a training aid. The ARFF trainer also includes an exterior, rectangular-four pans fuel spill fire simulation to impede pilot rescue. All FFTS configurations incorporate extensive safety features and safeguards to activate system shutdown in case of unsafe propane and temperature levels in the burn rooms, or personnel emergencies. All mobile FFTS have the capability to be connected to fixed propane and electrical power sources. FY96, FY98, FY99, and FY01 plus-up funding has been provided by Congress to procure FFTS for 18 CONUS and 3 OCONUS US Army military installations to date. Some of these FFTS are being used jointly by the Army and by Air Force or civilian fire departments under mutual aid agreements. The first modular/fixed structural FFTS was fielded at Ft. Monmouth, NJ, on 30 Oct 97. The first ARFF was fielded at Ft. Belvoir, VA, on 6 Mar 98. The first mobile structural FFTS was fielded at Ft. Lewis, WA, on 26 Jun 98. Four FFTS, for fielding at two CONUS and one OCONUS installations, remain to be funded by Congress to complete the latest revision of the Basis of Issue Plan (BOIP).

❧ **Tank Weapons Gunnery Simulation System / Precision Gunnery System** *(TWGSS/PGS)*: The U.S. Army's only digital, two-way appended, laser based precision gunnery and maneuver training device for Abrams Tanks and Bradley Fighting Vehicles. Also procured for the USMC Light Armored Vehicle. The TWGSS/PGS is integrated with the vehicle's fire control system providing exact replication of the ballistic solution for the selected ammunition type and range to target. The TWGSS/PGS allows full functionality of vehicle's fire control system including lead, super-elevation, & laser range finder. Realistic tracer, burst and obscuration effects are provided in all vehicle sights. Global positioning system, aural effects and data capture for enhanced After Action Review are also provided. TWGSS/PGS has a rate of return on investment of less than 28 months. Tank main gun training ammunition rounds are reduced by 10 round/crew/year; Bradley 25mm rounds are reduced by 192 rounds/crew/year. Over 1700 TWGSS/PGS are currently fielded to Active and Reserve units around the world. Total basis of issue is 2204.

Potential or anticipated programs:

❧ **Advanced Hornet Training System** *(AHTS)*: STRICOM (PM TRADE) will develop, field and support the Advanced Hornet Training System to simulate the tactical system. The AHTS will be employed at the Engineer School, selected home stations and at the Maneuver Combat Training Centers (MCTCs). The AHTS will incorporate a remote control capability and upgrade the capability of the munition. The remote control unit (known as the Advanced Hornet Control Station - AHCS), will be a small device (e.g., laptop computer or a hand-held device) that interfaces with the Advanced Hornet munitions to control the munition fields, arm the munitions, set the self-destruct time or destroy the munitions. The munitions will have the improved capability to report its status and act as a RF repeater for other reporting Advanced Hornet munitions. The munitions will also have built-in GPS for position location. Delivery TBD.

❧ **Range Data Measurement System/ Renovation** *(RDMS/R)*: The RDMS/R program will renovate the RDMS by replacing the logic modules and DCIs with current technology, and modifying the CMTC-IS software to support the new technology. The RDMS renovation must produce a subsystem that is logistically sustainable until the replacement CMTC-IS – the CMTC Objective Instrumentation System – is fielded in FY09-10. Delivery planned for 3QR FY03.

❦ **Combat Maneuver Training Center Interim Live Fire Instrumentation System** *(CMTC ILF-IS)***:** The CMTC ILF-IS will be an integrated system of computer software and hardware; workstations; databases; voice and video recording, production, and presentation equipment, interface devices; and communication systems to accomplish the following functions: Exercise Planning, System Preparation, Exercise Management, Training Performance Feedback, and System Support. The CMTC ILF-IS will support live training until the full-up LF-IS is fielded in the FY09-10 time frame. Delivery planned for 4Qtr / FY03

❦ **National Training Center Range Communications System** *(NTC RCS)***:** STRICOM is working an effort starting in FY01 to replace the NTC Observer Controller Communications Subsystem (OCCS) and build the infrastructure for the future replacement of the Range Data Measurement Subsystem as funding becomes available. This effort will take two systems currently operating on two different networks and put them on one network.

PM WARSIM Accomplishments:

⚜ WARSIM completed the initial Army Functional Assessment in August 2000 with follow-on testing every quarter until IOTE.

⚜ WARSIM demonstrated to senior Army officials at AUSA and Army Training and Leader Development Conference.

⚜ OneSAF Testbed Baseline (OTB) version 1.0 achieves HLA compliance and issued to the field as the replacement to ModSAF in December 2000

⚜ Army Modeling and Simulation Executive Committee concurred on the OneSAF Objective System program plans which resulted in full release of program funding.

⚜ WARSIM and CSTAR participate at the Senate Demonstration

⚜ DIA approves TACSIM security accreditation

⚜ CSTAR successfully completed functional testing in Nov 1999 and operational training at Ft Hood in May 2000

⚜ No Y2K failures identified for CBS, TACSIM, DBST, CSTAR and ModSAF

⚜ IEWTPT conducted a successful Milestone Review, RFP released and contract awarded during calendar year 2000.

⚜ Digital Battlestaff Sustainment Training (DBST) supported 6 ABCS collective training exercises events at Ft. Drum and the Joint Contingency Force - Advanced Warfighting Experiment at Ft. Polk.

⚜ DBST was installed, integrated, and tested at Ft. Lewis, WA in support of the Initial Brigade Combat Team (IBCT).

⚜ The DBST architecture was installed, integrated and tested at Ft. Irwin in conjunction with National Training Center rotation 00-10.

❦ The DBST architecture was installed, integrated and tested at ARCENT/3A, Fort McPherson, GA to support quarterly digital training requirements for the 3d Army staff.

❦ DBST was used in numerous Digital Collective training events in the Republic of Korea (5), Germany (2) and CONUS (6) throughout the fiscal year.

Significant Events:

❦ OSD re-baselines JSIMS program to High Level Architecture, resulting in WARSIM schedule changes.

❦ CSA approved WARSIM re-baseline to accelerate post IOC functionality.

❦ WARSIM and CSTAR participate at the Senate Demonstration.

❦ OneSAF officially chartered by the US Army on 1 May 2000.

❦ OneSAF selected as first acquisition program to use the STRICOM Omnibus Contract.

Award!:

LTC Tom Coffman, PM OneSAF and Bryan Cole, SAIC display the Command and Control Award presented by The Federal Linux Users' Group to Team OneSAF.

Special WARSIM Warriors:

👍 John Logsdon, Doug Parsons - Employee of the Quarter Awards.

👍 Cindy Harrison - Acquisition Person of the Year Nominee.

👍 Sandy Veautour - Acquisition Person of the Year Nominee.

👍 Kent Brookins - Outstanding support to WARSIM program & JSIMS rebaseline effort.

👍 CPT Scott Meehan - Volunteer Mentor to Junior Achievement Classes in local schools.

Potential or anticipated programs:

❦ **OneSAF Testbed Baseline (OTB) selected as the centerpiece driver for the National Guard Distance Learning effort spearheaded by the Iowa National Guard.**

❦ **Support to Army Battle Command Systems (ABCS) by PM WARSIM:**

❖ Participated in the Simulation to C4I Integrated Product Team (IPT), co-chaired by PEO C3S and PM STI. The focus of this group is to support interoperability and synchronization of data between the simulation and C4I communities. WARSIM approach for C4I interface is being expanded to become the standard.

❖ Participated in Workshops and IPRs for Training on ABCS Maneuver Battalions of Digital Divisions 2-N (DD2-N). Member of the Tiger Team for the development of the ABCS Training Systems Architecture (ATSA), consistent with the Army Training Information Architecture (ATIA).

❖ Provided input for simulation and training requirements to the ATSA Functional Capabilities Document (FCD) and the ABCS Common Services Operational Requirements Document (ORD).

❖ Generated discussions with PEO C3S, the National Simulation Center, and CECOM Research, Development and Engineering Center (RDEC) on WARSIM embedded training requirements for the WARSIM program as they relate to ABCS training needs. A roadmap is in process.

❖ Initiated an MOA between STRICOM and the CECOM RDEC to transition products and technology to support consistent ABCS training, mission planning and rehearsal.
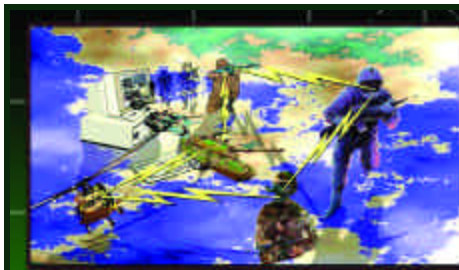
Engineering Directorate

FY00 Accomplishments:

❧ Initiated two new Science and Technology Objectives for Advanced Distributed Learning and Advance Trauma Patient Simulation for the development of leap-ahead training technologies.

❧ Awarded a $45 million five-year contract to the University of Southern California to create the Institute for Creative Technologies (ICT) which opened September 26, 2000 in Marina Del Rey, California.

❧ Successfully demonstrated embedded simulation on a Bradley Fighting Vehicle with a virtual gunnery range.

❧ The Technology Development Center hosted visit by the Honorable Louis Caldera, Secretary of the Army, and Florida Governor Jeb Bush.

❧ Engineering Directorate's Phase III Small Business Innovation Research (SBIR) with Diamond Visionics Company's effort on the Low Cost Commander's Display received a U.S. Small Business Administration's (SBA) prestigious Tibbetts Award for their exemplary achievement in the Small Business Innovation Research (SBIR) program.

❧ Secretary of the Army Visit

❧ Governor Bush Visit

Engineering Notes and News...

❧ Institute for Creative Technologies *(ICT):*

On August 18, 1999, the U.S. Army awarded a $45 million five-year contract to the University of Southern California to create the Institute for Creative Technologies (ICT). The grand opening was held on September 26,

2000 in Marina Del Rey, California and was attended by guests from the entertainment, academia and scientific communities. The ICT mandate is to enlist the resources and talents of the entertainment and game development industries and work collaboratively with computer scientists to advance immersive training simulations.

A relationship between entertainment, academia, and the Army offers many benefits. The ICT will work with the entertainment industry, which brings expertise in story, character, visual effects and production; game developers, who bring computer graphics and modeling resources; and the computer science community, which brings innovation in networking, artificial intelligence, and virtual reality technology. In awarding this contract to USC, the Army recognized that the University's wide range of expertise compliments the ICT mission.

Plans for the first year will focus on Mission Rehearsal Exercises covering cultural norms, rules of engagement, tactics, and procedures. The ICT will construct a prototype of an Advanced Leadership Training Simulation (ALTSIM) allowing participants to be immersed into a virtual

reality scene and interact with human characters and environments. Long-range plans are to develop a high fidelity, immersive environment similar to the fictional holodeck seen on the Star Trek television series.
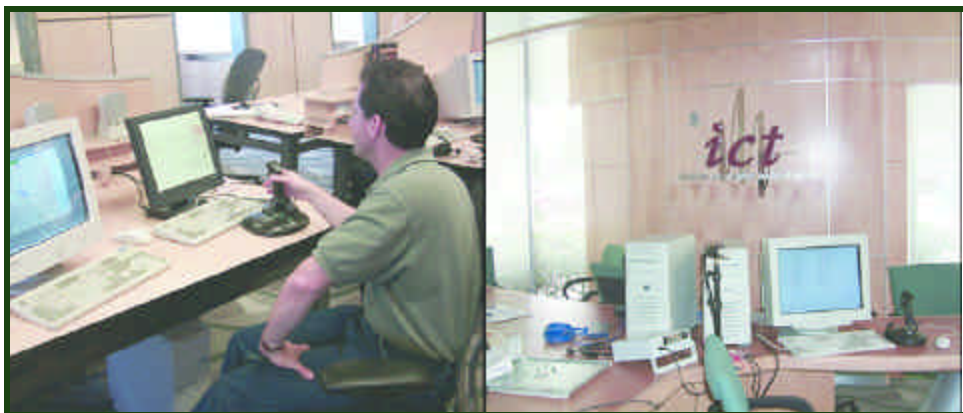
❧ **Inter-Vehicle Embedded Simulation Technology Science and Technology Objective (INVEST STO):** The Inter-Vehicle Embedded Simulation Technology Science and Technology Objective (INVEST STO), is the lead element in STRICOM's embedded simulation program. It is identifying and demonstrating technologies that will provide the Army 2010 and beyond with fully embedded simulation to support deployable training and operational functions.

The STRICOM Embedded Simulation program will demonstrate technologies for realistic individual, crew, and collective training performed on today's combat vehicles rather than on stand-alone simulators or part-task trainers. Using simulation tools such as a computer generated forces, virtual terrain databases and small image generators, virtual environments and opposing forces will be displayed in combat vehicle visual and electronic sensors. Gunnery and tactical training can be conducted in two modes. The first a fully virtual environment where the terrain, opposing force, and ammunition are all virtual. Second, a live environment where live or virtual ammunition could be fired from stationary or moving combat vehicles against realistic virtual targets injected into the live terrain scene. Units equipped with an embedded simulation system will be able to conduct realistic training at the motor park, at home station training facilities, during deployment or while waiting the order to execute a combat mission. This same technology, coupled with advanced C4I systems, could also be used to enhance operational functions such as mission planning, mission rehearsal, battlefield visualization, situational awareness and operational dominance.

STRICOM successfully demonstrated at AUSA 2000 on a Bradley Fighting Vehicle (M2A3) a fully virtual gunnery capability. In this mode the vehicle weapon systems were inactive and gunnery exercises were conducted in a fully virtual environment- virtual terrain, virtual movement, and virtual ammunition. The vehicle crew could see virtual opposing force vehicles that move and maneuver realistically over the terrain and be engaged with main gun, coax machinegun and missiles. The primary benefits of the Virtual Range are on-vehicle, on-station training system that deploys with the unit. It supports the "train as you fight" imperative.

Awards

👉 The TIBBIT Award was presented to Diamond Visionics of an Engineering DirectoratePhase III Small Business Innovation Research (SBIR) effort on the Low Cost Commander's Display for the Close Combat Tactical Trainer. This product will be utilized for production on the CCTT fielded systems. The Tibbetts Awards are given annually and were established to give well-deserved, national recognition to those small firms, individuals various organizations and projects that exemplify the business, economic and technological achievements of the Federal SBIR Program. This is the first time in STRICOM's history that a TIBBIT Award has been given to a STRICOM sponsored small business activity.

👉 Mr. Joe Pellegrino received the SBIR Coordinators and Technical Monitors Quality Awards and was recognized for both activities by the Honorable Paul J. Hoeper, Assistant Secretary of the Army for Acquisition, Logistics and Technology, and Dr. Andrews, Deputy Assistant Secretary for Research and Technology.

Degrees Awarded

🎓 Ms. Connie Perry received her Master's of Science degree in Industrial Engineering and Management Systems with a specialization in Simulation and Modeling Analysis from UCF in August 2000.

🎓 Ms. Susan Marshall received her Master's of Science degree in Industrial Engineering from UCF in December 1999.

🎓 Mr. David Edward Horrigan III received a Master's of Science degree in Interactive Simulation from UCF in May 2000.

🎓 Ms. Maria Bauer received a Master's of Science degree in Interactive Simulation from UCF in May 2000.

🎓 Mr. Keith Gardner received a Master's of Science degree in Interactive Simulation from UCF in May 2000.

🎓 Mr. Brian Comer received his Bachelor's of Science in Computer Engineering from UCF.

Personnel Highlights

👍   Mr. David Bundy was selected as a member of the Career Development Group (CDG) Year 2001.

👍   Mr. Bernie Gajkowski was selected as a member of the Career Development Group (CDG) Year 2001.

👍   Mr. Dennis Simpson was selected as a member of the Career Development Group (CDG) Year 2001.

👍   Mr. Richard Chandler successfully completed a two year assignment as the Science Advisor to the I Corps/Ft. Lewis Commanding General, as part of the Army Materiel Command Field Assistance in Science & Technology (AMC-FAST) program.

👍   Rene Escobar, Rich Keller, Gar Leung, Jorge Rivera, James Todd and Rene Raymon - Letter of Appreciation from PM TRADE for the Y2K testing and validation of the JRTC IS.

👍   Rich Keller, Jorge Rivera, and James Todd - Commanders Coin for the Y2K testing and validation of the JRTC IS.

👍   Tony Gillooley - Letter of Appreciation for C4I VE Workshop

👍   Mike Wright - E Directorate Nominee, Employee of the Quarter

👍   Rick Copeland - STOW-A FIRESTRIKE Exercise Commander's coin/citation

👍   Alesya Paschal - SOAR 160th Exercise Certificate of Appreciation

👍   Rob Forbis - CCTT Letter of Appreciation

👍   Barry Griffin - CCTT Y2k Letter of Appreciation

👍   Doug Parsons - Star Note from BG Bond, Letter of Commendation from AMSO and Coin from DUSA (or) On ONESAF Demo to Senior Technical Review Board

👍   Doug Parsons, Jim Grosse and Brian Holmes - STRICOM Team 3rd Place Finish At Army 10-miler

❦ **GTORS in . . . LogARMS out:** The Global Training Operations Readiness System (GTORS) is a business process tool for leading STRICOM Operations & Support Directorate into the 21st century. GTORS objectives include providing a paperless environment; streamlining management and decisions processes: and maintaining accurate and timely data for making operations decisions that ultimately benefit the warfighter.

❦ **Associate Contract Agreements (ACAs):** STRICOM Omnibus Contract (STOC) and Life Cycle Contractor Support (LCCS) contractors sign ACAs early during development of training devices to establish communications and exchange of data leading to a seamless transition of support for our customers in the field.

❦ Operations & Support (OPS) provides synergy to tie together the live, virtual, and constructive simulation domains through dedicated life cycle management and support of the Army's Training Aids, Devices, Simulations and simulators (TADSS).

❦ OPS provides world-class training support to active and reserve Army, Marines, Air Force, and National Guard units. OPS has operators, trainers, logisticians, and technicians on site at 67 locations around the world supporting warfighters. These sites service many other locations with on-call or mail in support.

❦ OPS has a proven record of supporting the warfighter throughout the live, virtual, and constructive domains "Anytime - Anywhere".

❦ OPS stands prepared to support the Army Transformation seamlessly and transparently.

❦ OPS participates in the Partnering Workshops through the following Programs and Companies:

PROGRAM	COMPANY
Live Training	Raytheon Technical Services Company
Virtual Training	DynCorp Information & Enterprise Technology
Constructive Training	Anteon Corporation
Artillery and Chemical Training	Ahtna Development Corporation (8A)
Aviation Training	L3 Communications Link Simulation

Financial Input:

❦ STRICOM financial execution again exceeded HQ AMC/DA goals for FY00 close out. OMA at 100%; RDTE at 97%; and Procurement at 95%.

❦ STRICOM successfully cleared unliquidated balance for canceling accounts.

❦ **First MSC to closeout FY 00:** STRICOM was the first MSC to closeout the FY00 financial accounts successfully.

❦ Implemented Heritage for use in budget preparation and execution cycles.

Manpower:

❦ **Annual IOB:** STRICOM's first Internal Operation Budget (IOB) was developed and executed in FY99. As the command enters FY01, a consistent, rational, defendable IOB has been built for FY01. The new budget process and implementation of metrics enabled the Command to better defend its requirements at both AMC and HQDA.

❦ **QDR 97:** STRICOM accelerated execution of the FY01 QDR reduction (directed in FY97). A reduction of almost 20% was accomplished through attrition, selective hiring and VERA/VSIP programs. By the end of FY00 the command reached its civilian manpower strength objective.

❦ **46 Reimbursable Spaces:** Through development of new customers and missions the STRICOM reimbursable (customer) program grew substantially. In response to this increased workload, AMC HQ provided the command with 46 additional reimbursable civilian personnel spaces beginning in FY01.

Cost Analysis & Systems:

❦ Conducted successful, non-protested, cost proposal evaluations on STOC, IEWTPT, and WIM. Implemented streamline, electronic cost proposal requirements for STOC, which reduced contractors' proposal preparation time/costs and helped the STRICOM cost evaluation to be performed much quicker than usual.

❦ Provided cost analysis support in the organizing of the JSIMs office. Tasks included establishing the Cost WIPT, developing agent partners, providing funded and unfunded requirements to OSD, and supporting the cost position.

❦ **Standardized Incremental Fee Policy:** In FY00, STRICOM implemented a Command Incremental Fee policy for Reimbursable (customer) work coming to the Command. This fee covers the "but for...." costs of performing the additional customer work. AMC HQ is currently considering implementation of this policy as a MACOM standard.

❦ Cleared approximately $12M Negative Unliquidated Obligations (NULOs). NULOs decreased from $13+M to $1+M.

❦ Successfully migrated the workforce to a new major version of the Automated Time and Attendance Production System (ATAAPS). In addition, six new releases of the Resource Management Tool (RMT) and four releases of SOMARDS were deployed.

Command Analysis & Planning Office

❧ **Served as the STRICOM lead for the 1999 Interservice/Industry, Training, Simulation & Education Conference *(I/ITEC)*.** I/ITSEC 1999 (FY 2000) had over 12,000 attendees, exhibitors and exhibit visitors. With 44 countries and 392 companies and commands participating in 252 exhibits this is the premier event of the year for training, simulation and education communities of the U.S. government and industry. As such it is also an event that attracts an ever increasing number of international participants.

❧ **Board of Directors *(BOD)*:** To resolve command issues, STRICOM organized a BOD, which is comprised of two-star representatives from key stakeholder organizations, such as DCSOPS, PA&E, OASA (ALT), ATEC, TRADOC, NSC, and III Corps. The BOD provides the linkage to the users and at the same time the integration of STRICOM's interests and requirements into the Army's resource planning and execution processes.

❧ **Senior Leader Advisory Board *(SLAB)*:** To assist in the Army's and other Services' resource and planning processes, STRICOM created a SLAB comprised of several, retired senior military and civilian leaders. The SLAB assists us in Command-wide strategic direction.

❧ **Advanced Planning Briefing to Industry:** STRICOM worked with the National Defense Industry Association (NDIA) to host a successful brief of potential programs for AFAMS, NAWCTSD, USMC and STRICOM to Industry representatives.

❧ **STRICOM Command Forecast:** The information compiled in this Forecast is prepared as an overview of the STRICOM mission, and the overall projections for the next five years. The projections identify future business opportunities for industry. The Forecast is presented at the Advanced Planning Briefing to Industry (APBI) in a series of briefs by STRICOM. NAWCTSD, AFAMS and USMC provide their forecasts as well during this two-day briefing. The STRICOM Command Forecast is available on the STRICOM Homepage.

❧ **International Cooperative Programs:** STRICOM continued its activities under the 5 existing International Data Exchange Agreements (DEA), and served as chairman of NATO Land Group 8 responsible for standards and interoperability amongst allied modeling and simulation activities. Development of new project arrangements were initiated with Sweden, United Kingdom and Germany in the area of Computer Generated Forces.

❧ **Live Fire Test & Training** *(LFT&T)*: The LFT&T Program fosters the exchange of technology development initiatives and uses between the live fire test and training communities to better serve the ultimate customer-the warfighter. The LFT&T program helps to implement one of the thrusts articulated by the Secretary of Defense, that of bringing together the testing and training communities for their mutual benefit. Another goal of the program involves establishing partnerships between DoD and the civilian sector.

❧ **Security Assistance/Foreign Military Sales** *(FMS)*: Delivered over $45 Million in STRICOM products and services to countries around the world. STRICOM extended the breadth of its global impact to 42 countries with the addition of Slovakia, Morocco and Argentina as FMS customers. A total of 19 new FMS cases were developed worth an estimated value of $38 Million. The command also processed 103 Export License requests in support of the direct commercial sale of modeling and simulation products abroad.

❧ **World Wide Web IPT:** The STRICOM World Wide Web is a reflection of the professional nature of information sharing in today's Army. To establish the policies and procedures for the use and management of STRICOM's WWW a WWW IPT was formed. The IPT will coordinate and implement policies, procedures and functional requirements to improve and expand the STRICOM web site for the benefit of the Command.

❧ **Exhibit IPT:** The STRICOM Exhibit Strategy IPT was established in March 2000. The members, collectively, are the PM/directorate levels STRICOM managers responsible for the exchange of information between the IPT and the POC for the Conference and/or Exhibits. The purpose of the IPT is ensure a STRICOM/AMC presence exists at all Conferences and/or Exhibits.

Acquisition Person of the Year:

Stanley Carpenter (PM CATT)

Employee of the Quarter

👍 1st Quarter: Robert Wolfinger

👍 2nd Quarter: Cory Youmans

👍 3rd Quarter: John Logsdon

👍 4th Quarter: Douglas Parsons

👍 **Contract Execution Award :**
Aviation Combined Arms Tactical Trainer/Aviation Reconfigurable Manned Simulator (AVCATT-A)

👍 **Project Execution Award :**
Aviation Training (AT) Life Cycle Contractor Support (LCCS)

👍 **Department of the Army Superior Civilian Service Award :**
John F. Donahue and Anthony M. Edwards

👍 **Department of the Army Commander's Award :**
Tony Gillooley

👍 **Special Act Award (from PM Brigade Combat Team):**
Joe Labalbo

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SIMULATION